Research Article

The Case of Using Instagram as a Mobile-Assisted Language Learning Tool in a Polytechnic Undergraduate English Class

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Abstract

Objective: The teaching-learning of English as a foreign language process is not a simple task to develop. Teachers look for different ways to attract and engage students in their classes. One of those ways include using various mobile phones applications to take advantage of students’ everyday uses of these devices. Instagram is one of the most popular mobile applications and the focus of this research. Therefore, this investigation aimed to measure the effectiveness of using Instagram as a tool for learning English.

Methods: A mixed-methods design was chosen for this paper. A survey, pretest-posttest, and semi-structured interviews were the chosen data collection tools. Descriptive analysis was used on the survey, the pretests and post-tests were analyzed using a paired T-test, and the interviews followed a general inductive approach.

Results: The descriptive analysis of students’ responses to the survey shows that learners have a positive attitude toward using Instagram to learn English ($M=3.38$, $SD=1.084$). Results of the Paired T-test showed there is a significant difference between Before ($M=70.4$, $SD=13.1$) and After ($M=74$, $SD=12.1$), $t(126)=2.4$, $P=0.017$. Also, informants mentioned that using Instagram to post tutorials was good for them.

Conclusion: The intervention was successfully adopted as the analysis revealed a significant difference between the pretest and post-test. Also, participants explained that they have found using Instagram positive for their English language development.

Keywords: mobile-assisted language learning, teaching English as a foreign language, Ecuador, Instagram, student performance

1 INTRODUCTION

The education world has experienced many changes in the last few years, primarily due to the COVID-19 pandemic outbreak[1,2]. Educators faced many challenges getting up to speed due to globalization, the hasty development of technology, increased mobility and migration, and the advancement of the knowledge society[3]. Teaching a foreign language involves several issues. Teachers must concentrate on their students’ skills development, as well as encourage and motivate them to learn the language[4]. Therefore, teachers must be updated and continuously obtain training certifications to improve their teaching skills[5-7].

The education industry cannot be divorced from technological advancements which could further support learning. The literature has vast accounts of the usage and effectiveness of technology in teaching a foreign language[8-10]. These expansions of educational technologies have changed educational practices, and shifting them to using media as a source of learning. For example, students designed a media tool which could convey the class contents[11]. Estrella[12] explained that using Facebook to practice writing allows learners to improve their skills. Taber[13] consulted students’ experiences after using Twitter to practice in their language courses. Results revealed that participants believed social networks can help them improve their language mastery. Research has been conducted to identify whether Instagram can be used in the classroom. Several scholars concluded that the application positively adds to a teacher’s toolbox[14-17]. Additionally, Prasetyawati and Ardi[18] concluded that Instagram can also be used to engage students, permitting them to collaborate and interact with each other.

Despite the wealth of information in the literature on using Instagram to aid in language learning, data originating from Latin American countries, especially from Ecuador is scarce. Thus, this research aimed to close that gap in the existing literature by probing Ecuadorian undergraduate polytechnic students of English as a foreign language.

To guide this study, the following research questions have been proposed.

RQ1: What are the Ecuadorian polytechnic undergraduate students’ perceptions of Instagram’s usefulness in learning English as a foreign language?

RQ2: To what extent does Instagram impact the language learning process of Ecuadorian polytechnic undergraduate students?

RQ3: How much do Ecuadorian polytechnic undergraduate students value their experience of using Instagram in their language learning process?

2 LITERATURE REVIEW

2.1 Computer-Assisted Language Learning

Computers were introduced to the field of education in developed countries as early as the 1950s and have evolved since then[19]. Nowadays, they are more powerful, faster, convenient, cheaper, and easier to use[20]. By the end of the 20th century, using of computers and the Internet have reshaped how foreign languages were taught. Hubbard and Levy[21] explained that computer-assisted language learning (CALL) is not limited to using computers to practice a language. It includes the networks that connect them and any other devices with a computer chip. The authors maintained that CALL comprises classroom language activities, design and evaluation, and academic discussions. Meanwhile, Hubbard and Levy[21] ascertained that CALL’s purpose is to cultivate knowledge and understanding of a language. Therefore, according to Levy[22], it comprises computer applications in language learning.

Three phases encompass the last forty years of CALL: behavioristic, communicative, and integrative[23,24]. Behavioristic CALL became known in the ‘60s and ‘70s. The use of vocabulary drilling and extrinsic feedback characterized it. It viewed language as a discrete component and emphasized control[25]. The communicative approach to foreign language teaching is the base of communicative CALL. Thus, computers stimulated discussion, writing, and critical thinking. Students generate utterances instead of drilling language[26]. Finally, integrative CALL integrates skills and technology into language learning. Learners use different technological tools in language use. Raleigh et al[11,27] recognized the advantages of using CALL. Students have fun when learning. It allows them to master the class materials by performing the assigned tasks, students have an active role when doing the activities, and CALL allows teachers to present the class in an imaginative form using simulations. Dina and Ciomper[28] concluded that computers promote interaction between teachers and students and stimulate students using animations or demos.

However, there are also drawbacks when using CALL. Some of them including inadequate number of computers available, technical issues, the requirement for teachers’ training to use the applications, the time needed to use the software sophisticatedly, and the high cost of implementation[29]. There are also issues related with the programs utilized and how students may master reading, listening, and writing. However, speaking is still an issue that requires more work. Finally, a theoretical framework is lacking to design and assess CALL systems[23].

2.2 Mobile-Assisted Language Learning

According to Nuraeni and Carolina[30], Mobile-assisted language learning (MALL) is language learning enhanced using mobile phones, MP3 and MP4 players, and PDAs, which students use to access materials and communicate with teachers and classmates anytime and anywhere they want[31]. Unlike classroom learning, MALL requires no physical location or a computer for learners to get the class

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materials. Furthermore, it solves language learning hurdles of time and place. Thus, they define MALL as an educational arrangement dominated by handheld or palmtop device technologies. MALL differs from CALL in the use of personal portable devices, which focus on spontaneous access and interaction in diverse use contexts. France et al. ascertained that mobile technology encompasses diverse types of technology that must be portable, movable, and personal. Mobile technology can be classified into one of two dimensions, as found by Naismit et al.. (1) personal and shared and (2) portable and static. Thus, four categories of mobile technology can be defined based on these authors’ orthogonal dimensions. (1) Personal portable technology encompasses devices that support one user and can be taken from one place to another. Mobile phones, laptops, and game consoles fall into this category. (2) Personal static technology houses fewer portable devices than the previous category but allows personalized learning experiences. These devices cannot be moved from one place to another. Classroom response systems are an excellent example of devices corresponding to this second category. (3) Shared portable technology comprises devices that permit the learner to move from one place to another. However, the devices are not movable, allowing multiple users to be connected simultaneously. Street kiosks or interactive museum displays are examples of installations that allow multiple users to access information and learning experiences. (4) Shared static technology is the last category. This type of technology allows complete classrooms to have shared interactions. These devices cannot be moved due to the constraints of their size. These technologies include interactive whiteboards or video-conferencing equipment.

The literature has registered student and teacher acceptance levels and perceptions of using MALL in their language classes. Nazir collected data from 100 private vocational college students in Malaysia. The authors used a survey questionnaire adapted from the technology acceptance model. According to their analysis, respondents have a positive perception of MALL. They believed using it was easy and improved the teaching-learning process.

Another quantitative study in Vietnam used the extended technology acceptance model survey on 293 college students. The sample was obtained from three different Vietnamese universities. The data were analyzed using the Rasch-based path model. Results suggest a crucial role played by teachers in encouraging students to adopt and use MALL in class. Teachers encouraged and recommended best practices for learners to use their mobile devices in their English classes. Botero et al. conducted a cross-sectional descriptive exploratory study. The researchers used an online survey via Limesurvey to collect the empirical data. Eighty-nine higher education language teachers were recruited from seventeen Colombian higher education institutions. These universities all offer a Modern Language bachelor’s degree. Results implied that attitude, social influence, and facilitating conditions are the dimensions that impact behavioral intention. Also, Colombian teachers use MALL because it contributes to adequate learning.

2.3 Previous Research on Language Learning and Teaching through Instagram

Among the several applications used to aid the language teaching-learning process is Instagram, a mobile platform that lets users share digital media with a global community of viewers.

In a mixed-methods study, Burnard et al. explored the answers from 219 English students at a Turkish university to obtain their opinions on Instagram’s usefulness in language learning. Findings suggest that students approve of using Instagram for educational purposes. Additionally, the authors identified that Instagram allowed students to improve their command of the language based on achievement scores. They concluded that Instagram could be a supplementary tool to formal teaching as learners are exposed to language while using it daily. Gonulal et al. conducted convergent parallel mixed methods research in Turkey. The researcher aimed to explore how students use Instagram for language learning and to learn from their attitudes and experiences. Ninety-seven adults took part in the survey. The quantitative data collected were analyzed using descriptive statistics and cluster analysis. The qualitative section of the study was done via thematic analysis. The results showed the potential Instagram has to aid learners in improving their communication skills. Based on their habits and orientations, the study identified two learner profiles, novice and experienced.

Nushi and Dayani performed another mixed-methods study on fifteen Iranian English students. Participants were selected based on their language proficiency. They were given a pretest and post-test on collocations. Additionally, ten participants were selected for a semi-structured interview to attain their perceptions of learning the language using Instagram. Results displayed a significant statistical difference in mean scores between the pretest and post-test, showing an effective treatment. Also, participants showed a positive attitude towards using the app to learn English. Therefore, the authors concluded that instructing a language using Instagram benefited the students.

Aloraini implemented a corpus-driven study on fifteen Instagram accounts created to teach English to an Arabic-speaking group of students. The study aimed to identify whether students had the opportunity to use the language and received feedback to improve their language production. The author looked at 140 Instagram comments on grammar and vocabulary, which were analyzed with a non-parametric Mann-Whitney test. Results of the analysis ascertained a
The ontological positioning of the researcher before the investigation is a requirement when working with qualitative research\cite{47,48}. Doyle et al.\cite{47} explained that from the available paradigms, the constructivist one permits the researcher to understand how to comprehend the study participants and make sense of their input. For Johnson and Onwuegbuzie\cite{44}, in this paradigm, the participants are the source of reality, and the researcher is the translator of that reality. Thus, they cannot stand separated. Therefore, this investigation focused on understanding the reality the participants perceived by describing their experiences during the intervention.

The majority of students are men, with 70%. Their ages range between seventeen and twenty-eight (\(M=21.88, SD=2.14\)), and the 21 to 24 (\(M=22.2, SD=1.17\)) years go the highest at 78%. When asked about the type of high school they attended, most \(5\%\) of them, \(63\%\) admitted having done their studies in a private one. Also, \(61\%\) of respondents disclosed that their institution gave them a bilingual education. Finally, the survey inquired about their city of origin, to which \(73\%\) of students answered that they had been born in Guayaquil.

On the other hand, \(82\%\) of respondents said they still live with their families, and \(55\%\) explained that their household includes four people. Furthermore, most learners, \(58\%, \) confided themselves to be in the third year of their study program, so they are more than halfway through their studies. Table 1 collects the demographic data obtained from the survey.

### 3.2 RESEARCH DESIGN

According to Creswell and Clark\cite{30}, there are several matters to consider when designing mixed methods research. First, the scholars emphasized that when using a triangulation design, results must be merged to validate the results. Creswell and Creswell\cite{34} also shared this point of view. Following Ansari’s suggestion\cite{47}, this researcher has opted for an intermediate position between phenomenologists and positivists to understand the research better. Thus, this paper uses a mixed methods research design which follow a sequential design while the implementation. The quantitative stage was finished first, followed by the semi-structured interviews.

### 3.3 Participants

The participants of this study were 95 undergraduate students at a public polytechnic university in Guayaquil, Ecuador. They enrolled in their study program’s upper-intermediate English subject. English is taught as a transversal subject, meaning every student must take each of the five subjects starting their first year of classes. The following information was obtained through a survey.

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### Table 1. Demographic Data

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Categories</th>
<th>(n=95)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>66</td>
<td>69.5</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>29</td>
<td>30.5</td>
</tr>
<tr>
<td>Age</td>
<td>17-20</td>
<td>14</td>
<td>15.1</td>
</tr>
<tr>
<td></td>
<td>22-24</td>
<td>75</td>
<td>78.7</td>
</tr>
<tr>
<td></td>
<td>25-28</td>
<td>6</td>
<td>6.2</td>
</tr>
<tr>
<td>High school</td>
<td>Private</td>
<td>60</td>
<td>63.7</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>35</td>
<td>36.3</td>
</tr>
<tr>
<td>High school</td>
<td>Monolingual</td>
<td>34</td>
<td>36.3</td>
</tr>
<tr>
<td>instruction</td>
<td>Bilingual</td>
<td>58</td>
<td>60.6</td>
</tr>
<tr>
<td></td>
<td>Trilingual</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>People in Household</td>
<td>3</td>
<td>11</td>
<td>12.1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>52</td>
<td>54.4</td>
</tr>
<tr>
<td></td>
<td>5+</td>
<td>32</td>
<td>33.4</td>
</tr>
<tr>
<td>Living with</td>
<td>Family</td>
<td>78</td>
<td>81.8</td>
</tr>
<tr>
<td></td>
<td>Siblings</td>
<td>9</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td>Roommate</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Additionaly, this researcher needs to declare his epistemological stance on the research. Bowleg and Towards\cite{49} described epistemology as the justification of knowledge. Creswell and Clark\cite{30} ascertained that it is the relationship between the researcher, the issue researched, and the respondents as they all co-create a new understanding of the reality being explored\cite{51}. As a result, with the students’ perceptions, this researcher will understand how they feel about using Instagram in their English classes.
3.4 Sampling Scheme
Several researchers have shared their views of the sampling scheme required for mixed methods research. From those options, the researcher followed a convenience sampling scheme. The decision was made since this technique allows for the choice of conveniently available individuals willing to participate in the study. Such individuals are the English V students enrolled in the courses assigned to the researcher.

3.5 Sample Size
Onwuegbuzie and Collins, Collins et al., Tavakol and Dennis comprehensively reviewed the sample sizes required for every type of research carried out. Based on that information, the researcher has chosen to go with the total number of students assigned to him, which adds up to 95, the sample size used for the quantitative section of the study. For the qualitative stage, the researcher will use a sample size of 12 participants, as Onwuegbuzie and Collins and Boddy suggested.

3.6 Instruments
Three data collection tools were used for this research: a pretest-posttest design, a four-part survey, and a semi-structured interview. All data were collected during the second academic semester, September to February 2022. Furthermore, the alpha obtained by the survey was 0.849.

3.6.1 The Pretest Posttest Design
The first tool in this investigation was a pretest-posttest used to compare changes resulting from experimental treatments. Research using this type of design uses a baseline assessment before the intervention begins and readminister the same test when the intervention ends. Thus, this investigation used this method to compare students’ results with Instagram before and after the intervention. Students were assigned a five-paragraph essay as their writing activity. The topic was obtained from the sample writing tests B2 First furnished by the Cambridge English Language Assessment page at https://www.cambridgeenglish.org/. The same topic was used for the pre-test and the post-test, as Rahm suggested.

3.6.2 The Survey
After the pretest, the researcher used a survey to collect data from participants. Driscoll et al. explained that surveys are helpful when information is available from an ample selection of participants. The author continues by saying that the main point of this type of data collection tool is to attempt to make generalizations.

This research used a survey adopt from Erarslan. It was composed with three sections. The first section covers the demographic information used in the participants heading. The second section inquired students’ agreement on four statements about the intensity of their use of Instagram. This section used a five-point Likert scale where one was “completely disagree”, and five stood for “completely agree”. Finally, the third section focused on using Instagram to teach English. This section contained twelve positive propositions, which participants had to rate using a five-point Likert scale where one indicated “completely disagree”, and five represented “completely agree”. Furthermore, the alpha obtained by the survey was 0.849.

Several measures were taken to account for validity. The first step was to secure the survey’s face validity. The researcher translated the survey questions into Spanish so that participants would not have trouble understanding them, in order to ensure the validity. Then, a language department colleague studied the survey before uploading it to MS Forms to confirm that the Spanish version accurately translated the original questionnaire.

The next step was to measure the tool’s content validity. According to Creswell and Miller, Almanasreh et al., content validity assesses the degree to which a survey measures the addressed construct. Baghestani et al. calculated the minimum number of experts required to agree on an item using the Bayesian approach at a .05 significance level. This research used five experts, as suggested, and a binary decision of yes or no to the question, is the item essential? Ayre and Scally proposed that a 0.5 level of agreement assures content validity. The experts rated the survey and reached a content validity ratio of 0.76, which is a good ratio. Thus, it can be said that the survey is a valid tool.

The survey was piloted with a few randomly selected students from a different course than those assigned to the teacher-researcher. The researcher explained that they had to focus on how easy the questions were to understand. From this pilot, three questions were identified and changed so they were easier to understand. Also, Cronbach’s alpha, an assessment of the instrument’s internal consistency, was performed on the pilot. The test result yielded an alpha of 0.929, demonstrating that the items had excellent discriminating power. Furthermore, Cronbach’s alpha calculated for the survey stood at 0.849.

3.6.3 The Semi-structured Interview
Another tool used to collect qualitative data was a semi-structured interview with an interview protocol of fifteen open-ended questions. The interviews were done following Laaksonen, who claimed it is better to use Computer-Assisted Personal Interviewing nowadays. Thus, the interviews were done via a Zoom meeting. Blair et al. also explained that the particularity of this type of interview is that they are not fixed, so the interviewer can have a list of topics of interest, thus guiding him in attaining the desired information. To perform the interviews,
the researcher followed the advice of several authors on the number of participants to interview to acquire saturation. Dworkin defined saturation as when no new data is obtained from the data collection process. This suggested number of participants is between five and twenty-five. Therefore, this researcher decided to go for the average and requested twelve students to volunteer for the interviews.

Two colleagues at the languages center helped review the interview questions using a format in which they had to choose which questions to include and which they wanted to exclude. Then Cohen’s kappa coefficient, which represents the accuracy and reliability in a statistical classification by measuring the agreement between two raters, was calculated. This calculation returned a percentage of agreement of 80%, which can be translated into a kappa of 0.593. This kappa can be understood as a moderate agreement, according to Dworkin. As a result, the questionnaire accounts for face validity.

Additionally, the researcher aimed to account for content validity. To do so, the protocol by Shi et al. suggested five readability analyses: Flesch Reading Ease, Flesch-Kincaid Grade Level, Gunning-Fog Index, Simple Measure of Gobbledygook Index, and Coleman-Liau Index. Readability tests can increase the validity and reliability of data collection tools. The results are shown in Table 2.

As seen in Table 2, the results obtained from each of the five readability tests performed are depicted. In summary, all the tests yielded very similar results. Most importantly, the questionnaire is easy to read and drafted in simple English. Thus, it can be said that the questionnaire is valid.

Every interview lasted around ten minutes. Before each interview, the researcher explained to the respondents the aim of the study and their role. Additionally, the investigator reminded them they had signed the informed consent form at the beginning of the semester and could withdraw from the interview if desired. Also, they were told their personal information would remain anonymous, and when reporting findings, they would be identified by numbers. Finally, before the questioning began, participants were asked if the interview recording would not impede them from answering honestly. They all were very receptive to the aims of the activity and agreed to the recording. Also, all twelve students chose the Spanish version when asked if they wanted to be interviewed in English or Spanish.

### 3.6.4 The Instagram Intervention

An Instagram account was created for the intervention at the beginning of the second semester 2022. Students were invited to follow the account to start working on the app. The content uploaded to Instagram was derived from the pretest results. The intervention began on the second week of classes and lasted four weeks. Participants were asked to work on assignments posted as pictures.

The Instagram intervention was designed after careful planning and preparation to target writing issues, including vocabulary. Also, the intervention’s Instagram account followed other language learning accounts, such as the one kept by Cambridge, so that students could have additional input. The grammar and vocabulary-based posts were shared on the app, and they required learners to answer questions, choose correct answers, or write sentences. Learners were also requested to write a comment on one of their classmates’ answers.

In addition to this, students’ speaking skills were targeted by posting assignments where learners had to record short videos responding to questions related to the guiding text. Also, peers had to comment on the general idea of each other’s videos and suggest how to improve the video for their next post.

### 3.7 Data Analysis

The data collected from the survey were analyzed using the SPSS V.20 statistical program. First, a descriptive analysis was performed on the data obtained. Then, a Paired t-test analysis was also conducted to recognize if there was a significant difference between the pre-writing test and the post-writing test. These two tests were carried out to attain the results of the quantitative section of the research. For the qualitative section, a thematic analysis was done on participants’ answers during the semi-structured interview.

### 4 RESULTS

The first analysis obtained a measure of the internal consistency of the survey, thus accounting for the survey’s reliability. The alpha acquired was 0.947. Then, the researcher did a descriptive analysis of the data.

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Table 2. Readability Analysis

<table>
<thead>
<tr>
<th>Test Used</th>
<th>Reading Score</th>
<th>Grade Level Score</th>
<th>Reading Level</th>
<th>Reading Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flesch Reading Ease</td>
<td>77.58</td>
<td>5.52</td>
<td>7th Grade</td>
<td>Fairly easy to read</td>
</tr>
<tr>
<td>Flesch-Kincaid Grade Level</td>
<td>75.80</td>
<td>5.80</td>
<td>7th Grade</td>
<td>Fairly easy to read</td>
</tr>
<tr>
<td>Gunning-Fog Index</td>
<td>7.90</td>
<td>7th Grade</td>
<td>Fairly easy to read</td>
<td></td>
</tr>
<tr>
<td>Coleman-Liau Index</td>
<td>7.04</td>
<td>7th Grade</td>
<td>Fairly easy to read</td>
<td></td>
</tr>
<tr>
<td>SMOG Index</td>
<td>9.89</td>
<td>7th Grade</td>
<td>Plain English</td>
<td></td>
</tr>
</tbody>
</table>
Table 3. The Intensity of Instagram Use

<table>
<thead>
<tr>
<th>Statement</th>
<th>n</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instagram is part of my daily activities.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.3953</td>
<td>1.30410</td>
</tr>
<tr>
<td>I feel out of touch with the world when I don’t check my Instagram.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>2.1860</td>
<td>1.04613</td>
</tr>
<tr>
<td>I see myself as part of the Instagram community.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>2.6628</td>
<td>1.21375</td>
</tr>
<tr>
<td>I would feel bad if they shut down my Instagram account.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>2.5581</td>
<td>1.41092</td>
</tr>
</tbody>
</table>

Cronbach’s alpha 0.849

Table 4. Using Instagram to Learn English

<table>
<thead>
<tr>
<th>Statement</th>
<th>n</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think I can learn new vocabulary by interacting with others via Instagram in English.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.9535</td>
<td>1.08364</td>
</tr>
<tr>
<td>I can see my English level improving as I interact with other people in English through Instagram.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.6744</td>
<td>1.12136</td>
</tr>
<tr>
<td>I believe I can learn grammar by using Instagram in English class.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.6628</td>
<td>1.18472</td>
</tr>
<tr>
<td>I prefer to use Instagram because I can communicate with different people around the world in English.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.4651</td>
<td>1.09219</td>
</tr>
<tr>
<td>I am exposed to authentic language when interacting with others on Instagram.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.2791</td>
<td>1.03595</td>
</tr>
<tr>
<td>I don’t feel pressure when I make mistakes on Instagram.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.1977</td>
<td>1.09351</td>
</tr>
<tr>
<td>I feel Instagram is a natural place to practice English because there is a meaningful interaction between people.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.4884</td>
<td>1.07094</td>
</tr>
<tr>
<td>I don’t mind if my classmates see the mistakes I make in English on Instagram.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.1395</td>
<td>1.08642</td>
</tr>
<tr>
<td>I feel that Instagram provides an encouraging environment to practice English, as no one judges my mistakes.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.1744</td>
<td>1.03118</td>
</tr>
<tr>
<td>Instagram offers me different ways to practice English.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.1744</td>
<td>1.10817</td>
</tr>
<tr>
<td>I feel good when I practice English on Instagram.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.1395</td>
<td>1.04220</td>
</tr>
<tr>
<td>I feel comfortable interacting in English on Instagram.</td>
<td>95</td>
<td>1.00</td>
<td>5.00</td>
<td>3.3140</td>
<td>1.06563</td>
</tr>
</tbody>
</table>

Cronbach’s alpha 0.921

Table 3 presents the descriptive analysis of the survey’s first section, which is the intensity of Instagram use. The highest mean score is 3.39 ($SD=1.30$), which relates to how respondents use the application daily. It is followed by a mean score of 2.66 ($SD=1.21$), where students admit to feeling part of the community of Instagram users. The lowest mean score ($M=2.18, SD=1.04$) went for the proposition, which states how learners would feel if their Instagram were closed for some reason.

The next section of the survey was to obtain the participants’ agreement on using Instagram to aid in teaching English. The descriptive analysis of the respondents’ answers is shown in Table 4. The highest mean score ($M=3.95, SD=1.083$) falls on the first proposition, “I think I can learn new vocabulary by interacting in English with other people via Instagram.” The second proposition reads: “I can see my English level improving as I interact with others in English through Instagram ($M=3.67, SD=1.12$). In third place comes the statement, “I believe I can learn grammar by using Instagram in the English class.” ($M=3.66, SD=1.18$).

The researcher performed a Paired T-test using T(df:126) distribution (two-tailed) of the pretests and post-tests to identify whether the means of the test results were significantly different (Lakens, 2013). Results of the Paired T-test showed there is a significant difference between
Table 5. Paired T-test

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P-value</strong></td>
<td>0.01676</td>
</tr>
<tr>
<td><strong>T</strong></td>
<td>2.4243</td>
</tr>
<tr>
<td>Sample size (n)</td>
<td>95</td>
</tr>
<tr>
<td>Average of differences (d̄)</td>
<td>3.6535</td>
</tr>
<tr>
<td>SD of differences (S̄d)</td>
<td>16.9838</td>
</tr>
<tr>
<td>Normality p-value</td>
<td>0.04233</td>
</tr>
<tr>
<td>A priori power</td>
<td>0.9999</td>
</tr>
<tr>
<td>Post hoc power</td>
<td>0.6721</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.362</td>
</tr>
<tr>
<td>Skewness Shape</td>
<td>Potentially symmetrical (P=0.092)</td>
</tr>
<tr>
<td>Excess kurtosis</td>
<td>1.8291</td>
</tr>
<tr>
<td>Kurtosis Shape</td>
<td>Leptokurtic, long heavy tails (P=0)</td>
</tr>
<tr>
<td><strong>Outliers</strong></td>
<td>-45, 74</td>
</tr>
</tbody>
</table>

Before (M=70.4, SD=13.1) and After (M=74, SD=12.1), t(126)=2.4, P=0.017.

The *P*-value resulted at 0.01676 (P(x£2.4243)=0.9916), which means the chance of type I error is small at 0.01676 (1.68%). The test statistic t=2.4243 is not in the 95% region of acceptance [-1.979, 1.979], with 95% confidence interval after minus before is [0.6711, 6.636]. The observed effect size $d$ is small, standing at 0.22, indicating the magnitude of the difference between the average of the differences and the expected average of the differences is small. The a priori power test is strong at 0.9999. Finally, the normality assumption was checked using the Shapiro-Wilk Test. ($x=0.05$) if the post-test minus pretest does not follow the normal distribution ($P=0.04233$). This test is robust for moderate violation of the normality assumption. The sample size is more significant than thirty. Hence, the statistic may be distributed approximately normally. The summary of the calculations can be seen in Table 5 below.

The data collected through the semi-structured interview followed the general inductive approach suggested by several scholars[28,29,76-78]. Furthermore, according to Denzin and Lincoln[48], Teddlie and Yu[79], and Creswell[72], the qualitative data must be coded, categorized, and interpreted to respond to the research questions. Thus, the researcher started reading the transcribed data; after some reading rounds, several themes were identified and organized. During the analysis, some themes were merged to minimize overlap and redundancy. For instance, one theme was labeled “using Instagram,” where informants mentioned the benefits of using Instagram to post tutorials. This led to the emergence of the “Instagram tutorials” theme, which further evolved into “Exposition to English”. Ultimately, five distinct themes were identified, which are detailed below.

### 4.1 Exposition to English

In general, participants believe they do get exposed to English when using Instagram. For example, participant no.5 said, “Yes. Since it is an open platform for everyone with different languages, this opens the opportunity to explore and learn new languages such as English.” Participant no.12 adds, “I think it forces me to be exposed because many people interact with Instagram, and not all speak Spanish, so it forces me to have English to understand the comments posted.” Also, Participant no.1 explained his position, “You feel confident using an application that you use quite often. In addition, chatting with other people in English helps you develop and learn a better vocabulary. Another positive aspect is that the stories, video calls, and audio notes help to have better expressions to make a better presentation.”

Despite the above positive comments, not every participant feels like that. Participant Ten explained, “I could practice new vocabulary and interact with other people from countries where they speak English, but I would not pay so much attention to grammar mistakes in this social network. This network has more videos related to current trends, such as fashion or technology.” Additionally, Participant no.4 ascertained, “That will depend on the use of the platform, since many times it is only useful to see posts from other people with whom you often do not communicate and therefore do not expose your English.”

Although some participants believe Instagram does not give them the proper exposition to English, most comments were positive. Learners think they get ample exposure to English since there is a lot of varied content in English. This content helps them learn vocabulary and naturalize the content they see. They can still use this content and include them, progressively and entertainingly, in their daily lives.

### 4.2 Fun Learning Tool

The second theme identified had to do with the way Instagram presents the content, which is enjoyable. In this sense, Participant Eight said, “Instagram is fun because it is the same way you learn English. Also, Instagram is a source of entertainment, and considering these aspects, you can make an English class that is out of the ordinary and more dynamic for learning and practicing.”

Participant Two explained, “I think that since Instagram is an application that can connect you with different people who speak English, it allows you to learn the language while having fun meeting other people. In addition, you can post different things using more informal English, and the community can help you improve.”

Finally, Participant Four said, “While one is watching videos, reels, or publications, a great variety of images
with text in English appear. As one is entertaining oneself on this platform, one usually stays for a while watching the articles in English or the publications that refer to grammar.”

4.3 Developing Abilities

The next theme identified was the above. Learners’ comments led the researcher to group their responses to the interview to how Instagram allows them to develop their English abilities. For evidence, the following participants’ comments have been selected. Participant One said, “I think it allows me to expand my vocabulary while practicing the pronunciation. Also, in social networks, I can learn new ways to express phrases. For example, I know that happy birthday is written ‘happy birthday’, but I have seen that they write it ‘Happy Bday’. Now I know this is an informal way of saying it.”

In the same vein, Participant Eleven explained, “Instagram is a social network that allows us to meet new people from other countries or with people who also want to practice the language. Therefore, it is important when studying a language to practice verbal and writing situations that occur every day in this social network. In this way, you notice the effectiveness of the classes on Instagram.”

Furthermore, Participant Five said, “Well, depending on the activities, you can propose many ideas for the student to develop their level of English. For example, you can make online streams about a debate in English or even talk to someone with good English. Then, in a group, you could ask students to speak in English and do activities through the stories about the English subject.”

4.4 It Helps Outside the Classroom

Participants talked about different issues, but how they see Instagram as a tool they can use when they are not in the classroom and continue learning English gave light to this heading. In this sense, Participant Nine said, “A classroom environment is almost always strict, which makes you feel pressure when learning something new. In contrast, you can learn on a platform like Instagram without the stress of failure.”

Participant Three followed this and explained, “I believe that constantly practicing what we want to say or what catches our attention would lead us to learn new ways of communicating in English. Also, as I said before, you get a larger vocabulary, so I believe it would break down the barriers of the classroom.”

In that same line, Participant Ten said, “I think it allows the student not only to see English as a subject that he has to pass but to see it in a fun and unusual way. It is also a great tool for learning and communicating with other native English speakers. So, for me, using Instagram to practice a language even when we are not in the classroom environment.”

4.5 The Best Way to Use It

This is the last theme devised from the semi-structured interviews. Participant Three said, “One way to use Instagram would be to talk about topics of common interests with all members. Also, commenting in English on other people’s posts on topics or images of personal interest and reading and learning that way of expression. Another way would be to follow pages that share vocabulary or phrases used in English. There are also pages where they post verbs with their meanings.”

On this same issue, Participant One explained, “Instagram is an option to communicate with more people. One user will always look for the best way to express oneself or convey a message to more people. Under this concept, you learn and memorize grammar and vocabulary that can be used for future conversations on social networks or in person. You can also expose a topic and upload it to the networks. It can be related to academics and obviously of interest to the student.”

Participant Thirteen ascertained, “I have several ideas in this regard. You can make videos and stories in English, commenting, and interacting with publications of other classmates in English. You can upload a photo or text in English, which can help improve your vocabulary. In addition to uploading videos or making live calls, you have to speak English without someone laughing or correcting you badly because it makes students feel self-conscious, and we will not be able to speak well. You can also use reels where real situations are presented using the academic language taught in class.”

5 DISCUSSION

This section will report on the results obtained by the data analysis and will be done by answering the research questions posed above. In addition, a brief discussion on the topic will be carried out after each question is answered.

The first research question sought to understand students’ perceptions of Instagram’s effectiveness in learning a foreign language. The answers to the semi-structured interview and the survey become necessary to respond to this question. Most participants recognized the usefulness of Instagram as a tool to aid them in learning English. For example, Participant no.3 said she believed Instagram has exposed her to the everyday English language. Although it might not be academic English, she continued that it is a good way to familiarize herself with the language. She expressed that she could see pronunciation tips and everyday English phrases in Instagram posts and learn from them.

Albeit the above, there are still participants who are
not completely convinced Instagram can be a good idea for them to learn the language. Take Participant no.11’s comments. He believed the success of Instagram depends on the pages he uses and his contacts on it. He said that if the followers of a page only speak Spanish and not English, it would be challenging to interact using English. He concluded that in such a case, Instagram would not be valuable for someone who wants to learn English. Therefore, opinions vary from one participant to another. However, what is certain is that the majority recognizes the application’s usefulness to one degree or another. These results concur with other researchers [79-81].

Further evidence supporting this notion emerged from the survey results. The proposition with the highest mean score indicated that respondents viewed Instagram as part of their daily lives. Notably, the second-highest mean score was linked to the belief that Instagram assists in learning new vocabulary. Meanwhile, the second highest mean score concerns that respondents see their English level improve after interacting with others in the app. These results are supported by Erarslan [15].

In summary, students perceive Instagram as a beneficial tool outside the classroom to support their language learning. While not all students are entirely convinced of its advantages, the majority affirm that Instagram can aid in language learning. Providing the account followed is used to support class content, and all interactions are done in English, Instagram can become an excellent asset for English teachers. Also, it is necessary to remind teachers that all interactions must have a certain degree of creativity, which can lead to using an out-of-the-classroom device to learn English in a fun and interactive way.

The second research question enquired about the impact of using Instagram on the language learning process of Ecuadorian polytechnic students. The answer to this question lies in the pretest–posttest analysis done above and depicted in Table 6. According to the paired t-test executed, there is a significant difference between Before ($M=70.4$, $SD=13.1$) and After ($M=74$, $SD=12.1$), $t(126)=2.4$, $P=0.017$. These statistical analyses manifested a variation between the participants’ scores in the pretest and the posttest. As can be seen, there is a gain of 13.37% in the posttest against the pretest. Thus, it can be ascertained that the intervention positively impacted students’ performance. These results concur with Erarslan [15], Prasetyawati and Ardi [80], and Beyranvand and Rahmatollahi [82].

The last research question aimed to determine whether students valued the experience of working with Instagram positively. To answer this question, the researcher resorted to the answers of the semi-structured interviews and the survey results. Participant Eight explained that she always uses Instagram to keep up with the news and gossip from famous actors and singers. She reckons that since she is always connected to this mobile application, it is only natural to use it for other issues, like learning English. She also said that using Instagram in class was of significant help for her because she could recall several forgotten grammar rules, and she learned some new things. Likewise, Participant Two confessed to having enjoyed using Instagram to practice grammar and vocabulary. He declared that commenting on his peers’ posts was a fun way to collaborate, and doing it on the app made him feel freer from stress. The results coincide with those of other researchers [16,17,67,81].

### 7 Conclusion

It is undeniable that social media platforms are trendy [12], and teachers have taken advantage of that popularity and introduced them to their educational contexts. As a result, a great body of research focuses on their effectiveness in teaching a foreign language [8,83-84].

Instagram, one such platform, has consistently gained popularity in recent years. However, the existing literature originating from Ecuador and focusing on the efficacy of Instagram as a language-learning platform is still scarce.

This research was initiated to address a gap in the literature, guided by three research questions. Data were collected from surveys, pre-tests and post-tests, and semi-structured interviews. The findings indicate that participants frequently use Instagram in their daily lives, engaging with various posts and comments. Thus, they believe that this application can immensely help them when trying to learn the English language. They also said that Instagram is a tool that can be used outside the classroom as participants can access it at any time, just by clicking on their mobiles. This feature, participants commented, is one of the most exciting characteristics of using Instagram since they do not feel the pressure of being in the classroom, where they must perform adequately. Working at their own pace and without stress gives them a sense of relaxation. This relaxed approach is believed to make learning more enjoyable and effective.

The interviews reinforced the idea that students have a positive view of Instagram’s role in their English practice and learning. They believe their exposure to the native language aids them in improving their general English level. Also, learners ascertained that working with Instagram outside the classroom positively impacted their learning. Viewing the explanations in pictures and short videos became very interesting and engaging. Furthermore, they mentioned that Instagram can be a great platform for them to practice different language skills, such as vocabulary, grammar, and pronunciation. Overall, the findings of this study suggest that Instagram can be a valuable tool for English learners, especially in Ecuadorian polytechnic institutions.
enlightening for them. Participants believe one thing they value from using Instagram is that all the information is there to consume as often as needed.

The results from the T-tests were also revealing. It is implied that the test results are significantly different, meaning that the post-test average scores were better than the average scores obtained in the pretest. There was an increase of 13.37% from the pretest- to the post-test average score. These results led the researcher to believe that using Instagram effectively influences teaching-learning.

The implications of these results are multi-faceted. Theoretically, teachers using Instagram should adopt a social constructivist approach, where learning stems from authentic experiences. Thus, teachers are encouraged to use Instagram in their English classes, integrating technology use in their classes. Secondly, teachers can use Instagram as a tool for support outside the classroom to flip their classes or post extra reference materials for students. Thus, it changes the traditional classroom and makes learning more fun in a stress-free and friendly environment. Third, the results presented in this paper also concern language center administrators. They can use the stated information to present their teachers with a proven functioning tool to aid their classes. Also, they can prepare more current technologically driven workshops to keep their teachers updated.

There are limitations to this research. First, The sample size of ninety-five students is insufficient for generalizing the results. Future research could include a broader range of English classes at the university’s language center. Another limitation was that the study focused only on students enrolled in the last level of the English subjects offered by the university. So, results may vary if lower-level students are considered for the study. Thus, it is suggested that for further research, a more diverse sample should be obtained by including participants from all the English subjects taught at this language center or participants that can manifest the various levels of English according to the Common European Framework of Reference.

Acknowledgements
Not applicable.

Conflicts of Interest
The author declared no conflict of interest.

Data Availability Statement
The data supporting this study’s findings are not openly available due to reasons of sensitivity and are available from the corresponding author upon reasonable request.

Author Contribution
Estrella F solely contributed to the manuscript and approved the final version.

Abbreviation List
CALL, Computer-assisted language learning
MALL, Mobile-assisted language learning

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